

Title (en)
VIBRATION-ABSORBING COUPLING, E.G. FOR MATRIX PRINTERS

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EP 0145881 A3 19860730 (DE)

Application
EP 84112336 A 19841013

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US 54252383 A 19831017

Abstract (en)
[origin: US4573363A] A vibration isolating coupling ideally suited for coupling the bobbin (31) of a linear actuator (23) to a flexure supported printer carriage (11) is disclosed. The two main sources of vibration in a system that includes a flexure (13, 15) supported carriage coupled to a linear actuator (23) are low-frequency vibration resulting from the pivot arc motion of the flexures (13, 15), and high frequency vibration resulting from the change in bobbin shape occurs as AC energy is applied to the bobbin (31). The first source of vibration is reduced by configuring the interface plane between the linear actuator and the flexure supported carriage such that contact occurs at spaced apart points located on either side of the flexure movement plane. Preferably, four contact points equally spaced from the flexure motion plane are used. The region between the contact points and the flexure motion plane is cut out so that no contact occurs in and on either side of the flexure motion plane. It is the absence of contact that reduces the first source of vibration. The second source of vibration is reduced by mounting a damping plate (61), preferably comprising a layer of viscoelastic material sandwiched between two layers of steel or some other rigid material, at the interface plane between the linear actuator (23) and the flexure supported carriage (11).

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B41J 25/006 (2013.01 - EP US); **Y10T 74/10** (2015.01 - EP US); **Y10T 403/454** (2015.01 - EP US)

Citation (search report)

- [AD] US 4180766 A 19791225 - MATULA JERRY [US]
- [AP] US 4461984 A 19840724 - WHITAKER C GORDON [US], et al
- [A] US 3425652 A 19690204 - LEARY GORDON H
- [A] DE 3151508 A1 19830714 - DAIMLER BENZ AG [DE]
- [A] GB 2060816 A 19810507 - WRIGHT BARRY CORP
- [A] US 1920436 A 19330801 - RIKER ANDREW L

Cited by
DE19505426A1

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